

more than pairs. This gathering would hardly have been owing to lack of water as there were numerous water-holes up and down Muckadilla Creek, and at other places at the time.

Doubtless a number of other birds with the same habit might be added to this list with more careful observation, and I shall be glad to hear of any such, especially of any other species, from readers.

The reasons for such gatherings may so far be only conjectural. The best reason I can suggest is as follows:

That it may be a provision of Nature causing some of those birds which do not have the migratory urge and habit, to gather together in certain seasons, during which gatherings, usually occurring in autumn or early winter and before the breeding period, they by some means manage to readjust their family alliances, thus accomplishing what probably happens during the annual migrations of other birds, and by such means preventing the inbreeding, which would probably occur amongst birds which always remained in the one locality.

I may mention three other birds, and I do so with due reserve, as I am not certain if they belong to the same category as those previously mentioned.

The Bush Lark (*Mirafra javonica*), seen in northern inland Queensland in September, 1937, in forest and grass in a scattered flock of a few scores over an area of two or three acres.

The Pratincole (Swallow-Plover), seen in large numbers over two or three miles of plain country near water about 100 miles south of Hughenden, August-September, 1937.

The Frigate Bird (*Fregata* sp.), seen in South-East Papua, July, 1929, in a large company of three or four score.

THREE NEW CHALCIDOIDEA FROM AUSTRALIA.

By A. A. Girault, B.Sc.

Lincolna Girault, nov. Miscogasteridae.

About half the size of *Trichilogaster* Mayr (type *xanthocephalus* compared), and the antennae are inserted distinctly below the middle of the face, slightly below the eyes. Axillae joined or nearly. Abdomen depressed, widest at the middle, the second segment a fourth of the surface, exceeding Nos. 3 and 4, which are equal, but No. 5

is apparently the longest. Postmarginal vein slightly exceeding the marginal, the stigmal still shorter, distad curved, long, the marginal short as compared with the submarginal (not half it). Hind tibial spurs single. Submarginal vein broken at apex (pale). Mandibles bidentate, the second tooth widely truncate but acute-angled at the corner nearest the acute first tooth.

Antennae 12-jointed with two ring-joints, three club joints, the pedicel exceeding any funicle, short, the club not more than half the length of the funicle (at least distinctly shorter than it). Metatarsus a half longer than wide, equal to the (hind) tibial spur, short; in the middle leg, the first joint of the tarsus is twice longer than wide, also equal to the tibial spur (middle), which is also longer. Furrows deep, complete. Pronotum transverse, the propodeum much less so, with a delicate though distinct median carina. Palpi concealed. Fringe present, abundant, short.

The male is the same but the abdomen is still more compressed and narrower, the scape shorter. From the type of *Neosystasis* (types compared), this genus is non-metallie, the metatarsus much shorter, so the marginal vein (equal to the submarginal in the other); the abdomen is flatter; and so forth. Named for the great Abraham Lincoln.

Lincolna aldrovandii Girault, nov.

Black and finely polygonally reticulate, the legs lemon colour except the hind coxae and the femora (especially in legs Nos. 1 and 3), except widely at apex; antennae dusky, the fore wings distinctly so except proximad from the base of the bend of the submarginal vein, the bristles of the latter long and slender, those of the marginal short. The immediate base of the wing is also dusky, the hyaline areas of the wing being as noted, a rectangle against the marginal vein, the area between the postmarginal and stigmal veins and a longer crescent mid-longitudinally below the middle of the wing and beginning somewhat distad of the proximal margin of the infuscation. No basal nerve but the ciliation extends a half way to the base of the wing (more or less) except caudad; from the apex of the submarginal vein, a wide, oblique (caudo-proximad), naked path occurs upon the proximal half of the bend of the sub-marginal vein, three-fourths or more the way across and bordering the proximal margin

of the main infuscation. Ciliation dense as also in the costal cell except proximad widely.

Segments Nos. 1-5 of the funicle square; first ring-joint shorter than the second. Clothing of the flagellum stiff, scattered and not long. Funicle segments shortening in succession to some extent, especially in the male. Scutellum convex, longer than wide, its sculpture finer and more longitudinal. Longish black hairs upon the callus or dorso-lateral aspect of the propodeum. Hind femora simple, with longish soft hairs. Clothing of the dorsal thorax not conspicuous but present. Hind wing with about sixteen lines of dense ciliation. Spiracle circular.

The male coxae were not seen.

The collector of this new form, characterised especially by the low insertion of the antennae, wrote concerning it that it was very interesting to him, and "I have only just bred a limited number from galls on the leaves of turpentine, about a hundred small galls upon each leaf, one insect in each gall. A general examination of the adult and also the form of its egg, leads me to think that it comes somewhere near to the *Trichilogaster*s which cause galls upon the *Acacias*. There is no reference to this species in any of the publications we have, and you will doubtless know if it has been described."

He gave a rough outline drawing of the egg which resembles that formerly described for *Trichilogaster*, and later promised to illustrate it, that is, the adult and gall. The species is named for Ulysses Aldrovandi, 1602.

The types are deposited in the Queensland Museum, together with the following two species received at the same time.

Though classed with the *Miscogasteridae* rightly, this genus is doubtless another of those gall-forming chalcids, hitherto unclassified correctly and grouped more or less closely together on account of habit. However, in my monograph of the Australian Chalcidoidea, now in MS. in the Queensland Museum, I have classed these rightly into their various families.

A male, three females from leaf-galls on *Syncarpia laurifolia*, Sept. 9, 1938, Newcastle, N.S. Wales, N. S. Noble, types.

GENUS EPIMEGASTIGMUS GIRAULT

Epimegastigmus darlini Girault, nov.

Named for Grace Darling, a brave young life-saver.

Lateral ocellus distinctly closer to the median than to the eye, as far from the eye as from each other, twice farther apart than far from the median, occiput margined above. In the general diagnosis of the genus in widest sense, runs to *fulvipes* (the spiracular sulcus is black); then to *maculatipennis*, but the dorso-lateral groove is also black and there is a median groove upon the scutellum. In *fulvipes*, the lateral grooves of the scutellum are present (the ovipositor is distinctly longer here, nearly as long as the body). *Maculatipennis* is grooveless (scutellum) and distinctly smaller and lacks the black dorso-lateral groove (propodeon) or sulcus.

Mercatori bears a distinctly shorter ovipositor, three grooves upon the scutellum and the dorso-lateral groove (propodeon) is concolorous: also the size is a half smaller, the second wing with only ten lines of discal cilia to the other's fourteen; the neck of the stigmal vein is longer than wide here but in *mercatori* square. The sulci of the propodeum are not black in *maculatipennis*; nor is there any black upon the pro- and mesoventer. The species *fulvipes* bears a black triangle upon the proventer, the meson of the mesoventer is widely black (but distad less widely). In this new species, only the base of the triangle, or all of it, faintly, the mesoventer's ventral median line black only narrowly.

The species *herndoni* is flavous, bears no grooves upon the scutellum, the lateral ocelli are equidistant (apparently), (at least one or more abdominal bands), and is a half smaller. From *limoni*, this species differs in that the ovipositor and the body are somewhat longer; the flagellum, the pedicel above except at the apex, and the scape at the apex above widely, are black; the first funicle joint is distinctly longer, distinctly exceeding the pedicel (equal in the other, *limoni*); the dorsal thoracic sutures are not black; in *limoni*, according to its description, the scutellum is trisulcate, but I could not confirm this, and only the median groove was re-seen, which I think is the correct interpretation of this species. Its so-called variety, however, *morleyi* bears the three grooves.

The basal nerve bears six larger cilia, these smaller than the large submarginal vein's bristles (8); nine similar cilia continue (towards base after junction with the cubital nerve); the basal vein is chitinous, crossing the cubital as usual and curved distad. Third mandibular

tooth widely truncate (both sides). Seventh funicle a third longer than wide.

Black as follows: Upper occiput, antennae as above, cephalic margin of the scutum and propodeum, spiracular and dorso-lateral sulci of the propodeum; a spot each side of the median line of the propodeum toward apex (foveum), apex of the axilla (distal end), median line of the venter of the meso-thorax, base of the middle coxa cephalad (continuously), same very narrowly of the fore coxa; two abdominal bands (across), the second at middle; and a dorso-lateral stripe to the apex from the second cross-band. The first cross-band of the abdomen is between the second and the base, both bands interrupted at the meson; ovipositor valves. Metatarsus longer than with *limoni*, over three times longer than wide, much exceeding the longer one of the hind tibial spur.

The collector and rearer of this species has written to me that this species does not destroy the gall-former, *Trichilogaster* (called by him *acaciae-longifoliae*, though I think this is doubtful, maybe), until the latter has pupated.

The type material was reared from flower-galls on *Acacia florabunda*, Botanic Gardens, Sydney, Nov. 27, 1937 (two type females); a cotype female from the same tree, same gall, Dec. 8, 1936; and a cotype female from the same, Killara, Dec. 28, 1937.

In the above description, comparisons were with types of the species mentioned.

GENUS AMONODONTOMERUS GIRAULT

Amonodontomerus noblei Girault, nov.

From the species *poeta*: Thrice larger, the ovipositor somewhat longer, equal to the abdomen, the propodeum with a median carina, the pronotum longer and with at least one more row of setigerous punctures; the scutum is setigerous (segment No. 2 of the abdomen is twice the length of No. 3 and equal to the large No. 4, as in the other species); and so forth. The scape is red. Runs in my modernised tables, to the species *fulgens*, except that the hind femur is metallic, but it is twice larger (but not always so), the ovipositor is equal to the abdomen, and therefore is twice longer, there is one or two rows more of setigerous punctures upon the pronotum, the vertex and the upper occiput is much more hairy, the first joint of the funicle is somewhat longer than wide,

the second is equal to it but stouter, the scutum is setigerous, and both the pedicel and the scape are longer. The species is almost as large as the Apple-seed Chalcid (*Syntomaspis*), yet contrarily much exceeds *Syntomaspis d'arci* Gir. (types).

The upper thorax is cross-striate: Mesonotum very finely but less cross-wise upon the scutellum, inclining there to reticulation; the pronotum very finely. Propodeon between the sulci along the meson very finely shagreened. Only the scutum is generally setose; and the finely cross-striate pronotum, scutellum with at least three bristles upon each side, the distal at the cross suture, distad of this part, scutellum glabrous. Head all glabrous except the finely, circularly, striate occiput and near the mouth from each side. Coxae and the hind femora aeneous, but the femur not heavily so. Lateral ocellus closer to the eye than to the median. Abdomen glabrous, the petiole wider than long. Pedicel at base above metallic. Fifth funicle segment twice wider than long, shorter than the first club joint. The venation is darker than with *fulgens*, but there is the same break at the apex of the submarginal vein, the same small marginal vein's bristles (somewhat coarser than the main discal ciliation), and the same elongate submarginal vein's bristles; no basal nerve but the same naked, rounded, middle area opposite to the base of the bend of the submarginal vein, and from this three lines of large (larger) discal cilia running to the base or nearly, and in the cephalic half of the wing or thereabouts. The costal cell bears distad, one more line of ciliation, and the stigmal knob is larger in this species in reference to the comparatively slender neck. Submarginal bristles, shorter distad.

Metatarsus distinctly the longest of the segments (of the hind tarsus), five or six times longer than wide, ventrad twice the length of the longer hind tibial spur which, in turn, is twice the length of the smaller spur.

The types distinctly exceed that of *arboreus* (by three times), and also those of *megastigmoides* and *beerwahi* almost by as much; they are as large as that of *Megastigmus* (sens. lat.) *bisculus*, exceeding that of *maculatipennis*. The under wing bears twenty lines of ciliation, the hind fringe not long.

The species is named in honour of Mr. N. S. Noble, an entomologist of Sydney, for his work upon insects

other than pests. Two females reared by Mr. Noble from the flower-bud galls of *Acacia florabunda* caused by *Trichilogaster*, Botanic Gardens, Sydney, Nov. 27, 1937.

SOME NOTES ON DENDROBIUM PHALAEOPSIS (Cooktown Orchid)

By G. Bates, Cairns.

(Paper read before the members of the Queensland Orchid Society by whose permission it is now reproduced).

You are all familiar with *Dendrobium Phalaenopsis*, which makes such a pretty picture with its raceme of mauve flowers, but how many of you have been privileged to see this fine Dendrobe in its native habitat during the flowering season.

This was a pleasure experienced by me during a recent trip to the country west of Cooktown, and it was a sight never to be forgotten. *Dendrobium Phalaenopsis* is known throughout North Queensland as the "Cooktown Orchid," because it is common in the Cooktown district, but it is, however, found in many other localities. My data is incomplete, but I have specimens from Leura, 67 miles west of Cooktown, Maytown, which is 45 miles south-west of Leura, and from the Mitchell River district, 60 miles north of Chillagoe. How far North on Cape York it extends is a matter for speculation.

Leaving Cairns per launch one morning we arrived in Cooktown, nearly a hundred miles away, just before dark, after a trip rich in beauty. The course lies close to land and one cannot fail to cogitate on the desirability of exploring the almost uninhabited country along the coast, in search of orchids. But this must wait until another time, as it is *Dendrobium Phalaenopsis* we are out to see this trip—so on to Cooktown.

Cooktown is a ghost town. The failure of the Palmer Goldfields reduced the district population from 60,000 to a few hundreds. The town itself, with its fine buildings, once a hive of industry, has now only thirty per cent. of the remaining shops occupied. Nevertheless, it is a very beautiful place, with a superb climate and a reputation for the quality of its citrus fruits.

The railway line, which extends west of Cooktown to Leura, a distance of sixty-seven miles, was built to serve